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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,140	09/24/2003	Richard G. C. Williams	TI-35890	7392

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EXAMINER	
BAYARD, EMMANUEL	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,140	WILLIAMS ET AL.	
	Examiner	Art Unit	
	Emmanuel Bayard	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts U.S. Pub No 2006/0166619 A1.

As per claim 1, Roberts teaches preamble to signify a transmission, the preamble comprising: an expected sequence field, the expected sequence field to contain a first sequence of unscrambled values, wherein the first sequence of values is known by a receiver (see fig.18 element 1810 and page 19 paragraphs [0275-0276]; and a synchronization field following the expected sequence field, the synchronization field to contain a second sequence of values scrambled by a scrambler (see fig.18 element 1820 and page 19 paragraphs [0275-0276]).

As per claim 2, Roberts inherently teaches wherein the first sequence is inserted into the preamble before the remainder of the preamble has been modulated.

As per claim 3, Roberts inherently teaches wherein the first sequence is inserted into the preamble after the remainder of the preamble has been scrambled.

As per claim 4, Roberts teaches a start frame delimiter following the

synchronization field, the start frame delimiter (see fig.22a element 2230 and page 28 [0403]) to contain a third sequence of values scrambled by the scrambler.

As per claim 5, Roberts teaches wherein the preamble is an enhancement to an existing preamble, and wherein the expected sequence field and the synchronization field combined is equal in duration to a synchronization field in the existing preamble (see page 17 [0238]).

As per claim 6, Roberts teaches wherein the expected sequence field is transparent to a receiver expecting the existing preamble, and wherein the receiver may synchronize to the synchronization field (see page 19 [0276] and page 20 [0286]).

As per claim 7, Roberts inherently teaches wherein the first sequence of values is an arbitrary sequence of values, known to both a transmitter and the receiver.

As per claim 8, Roberts teaches wherein the first sequence of values is a sequence of 1's.

As per claim 9, Roberts inherently teaches, wherein the first sequence of values is a sequence of 0's.

As per claim 10, Roberts inherently teaches wherein the first sequence of values is a sequence of alternating 1's and 0's.

As per claim 11, Roberts inherently teaches wherein the first sequence of values is a combination of equal length groups of alternating 1's and 0's, wherein each group is of length greater than one value.

As per claim 12, Roberts inherently teaches wherein the first sequence of values is periodic in nature.

As per claim 13, Roberts teaches wherein the expected sequence field and the synchronization field combined is equal to a multiple of the length of a pseudo-random number sequence, and wherein the expected sequence field is eight (8) times the length of the pseudo-random number sequence (see page 19-20 paragraphs [0278-0289].

As per claim 14, Roberts teaches wherein the preamble can be used in a digital communications network (see page pag1 [0010]).

As per claim 15, Roberts teaches, wherein the digital communications network is wireless (see abstract).

As per claim 16, Roberts inherently teaches wherein the digital wireless communications network is adherent to an IEEE 802.11b technical standard (see page 12 [0171]).

As per claim 17, Roberts inherently teaches wherein the digital wireless communications network is adherent to an IEEE 802.11g technical standard.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 18, 22-23 and 26-27 rejected under 35 U.S.C. 102(e) as being anticipated by Carsello U.S. Patent No 7,106,814 B2.

As per claims 18 and 22, Carsello teaches a method for low power preamble detection comprising: detecting signals on a transmission medium (see fig.3 element 300 and col.4, lines 65-67 and col.7, lines 35-36); using analog circuits to match samples of the detected signals with a copy of an expected sequence (see fig.3 element 324 and col.8, lines 27-35), wherein the expected sequence is transmitted as part of the preamble (see col.6, lines 25-35); and enabling digital circuitry if the samples of the detected signals match the copy of the expected sequence (see fig.3 element 306 and col.8, lines 35-67 and col.9, lines 2-20 and col.10, lines 5-20).

As per claim 22, Carsello inherently teaches after the enabling: disabling the digital circuitry once processing related to the preamble is complete; and repeating the detecting, using, and enabling.

As per claim 23, Carsello teaches a method for preamble detection at a receiver comprising: determining an operating mode of a transmitter (see abstract and col.3, lines 48-51); if the transmitter can transmit an expected sequence field in a preamble, detecting signals on a transmission medium (see fig.3 element 300 and col.4, lines 65-67 and col.7, lines 35-36); using analog circuits to match samples of the detected signals with a copy of an expected sequence (see fig.3 element 324 and col.8, lines 27-35), wherein the expected sequence is transmitted as part of the preamble (see col.6, lines 25-35); and enabling digital circuitry if the samples of the detected signals match the copy of the expected sequence (see fig.3 element 306 and col.8, lines 35-67 and

col.9, lines 2-20 and col.10, lines 5-20); the method further comprising if the transmitter does not transmit an expected sequence in a preamble (see col.3, lines 57-63);, detecting signals on the transmission medium (see fig.3 element 300 and col.4, lines 65-67 and col.7, lines 35-36); and using digital circuits (see fig.3 element 306 and col.8, lines 35-67 and col.9, lines 2-20 and col.10, lines 5-20) to process samples of the detected signals to search for a specific pattern.

As per claim 26, Carsello inherently teaches wherein the receiver remains in an operating mode depending on the operating mode of the transmitter until the receiver is reset (see col.3, lines 55-67 and col.5, lines 5-25 and col.6, lines 21-35).

As per claim 27, Carsello inherently teaches wherein the receiver remains in an operating mode depending on the operating mode of the transmitter until the receiver moves out of range of the transmitter and begins communicating with a different transmitter (see col.3, lines 55-67 and col.5, lines 5-25 and col.6, lines 21-35).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 19-21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carsello U.S. Patent No 7,106,814 B2 in view of Wang et al U.S. Pub No 20040101068 A1.

As per claims 19 and 24-25, Carsello teaches all the features of the claimed invention including providing data received after the preamble to the digital circuitry for processing (see fig.3 element 306 and col.8, lines 35-67 and col.9, lines 2-20 and col.10, lines 5-20).

However Carsello does not teaches training receive circuitry with a remainder of the preamble.

Wang et al teaches training receive circuitry with a remainder of the preamble (see fig.3 element 317 and page 4 [0027]).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Wang et al into Carsello as to determine appropriate sets of filter taps for both feed-forward and feedback filters and compensate for channel distortion as taught by Wang (see [0027]).

As per claim 20 Carsello and Wang would teach wherein the method repeats after the providing as to determine appropriate sets of filter taps for both feed-forward and feedback filters and compensate for channel distortion as taught by Wang (see [0027]).

As per claim 21, Carsello and Wang would teach wherein training comprises adjusting equalizers and filters based on the remainder of the preamble as to determine appropriate sets of filter taps for both feed-forward and feedback filters and compensate for channel distortion as taught by Wang (see [0027]).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Garg U.S. Patent No 6,771,611 B1 teaches a frame generation.

Darshan et al U.S. Patent No 7,106,749 B1 teaches a system for data stream processing.

Fu et al U.S. Pub No 2005/0031308 A1 teaches frame indexing.

Shyu U.S. Patent No 6,021,391 teaches a method and system for dynamic data encryption.

Hansen et al U.S. Patent No 5,272,700 teaches a spectrally efficient broadband.

Marshall U.S. Patent No 5,949,817 teaches a multi-level correlation.

Razavilar et al U.S. Pub No 2003/0181211 A1 teaches a method and apparatus for dynamic channel.

Halasz U.S. patent No 7,039,068 B1 teaches packet assembly. (***)

Huang et al U.S. Patent No 6,691,081 B1 teaches a digital signal.

Robinson et al U.S. Patent No 5,555,305 teaches a method and apparatus for secure transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571 272 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Emmanuel Bayard
Primary Examiner
Art Unit 2611

11/29/06